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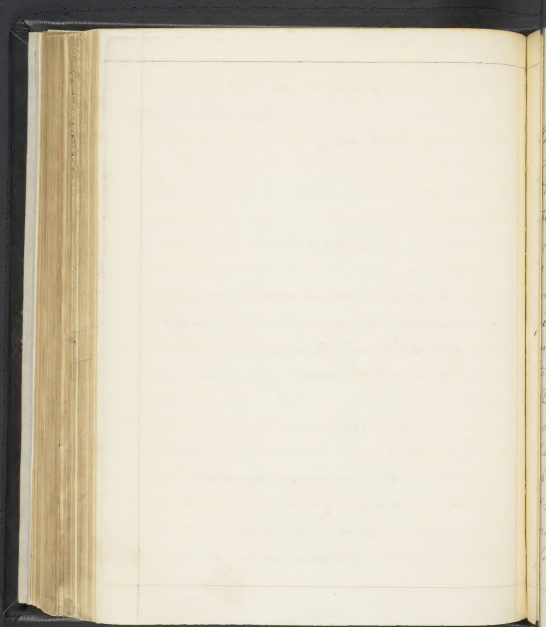
Hepatitis:

Submitted to the medical
Faculty of the University
of Pennsylvania, for the
degree of Doctor of Medicine:

By

Fleming Jordan,
of
Alabama.

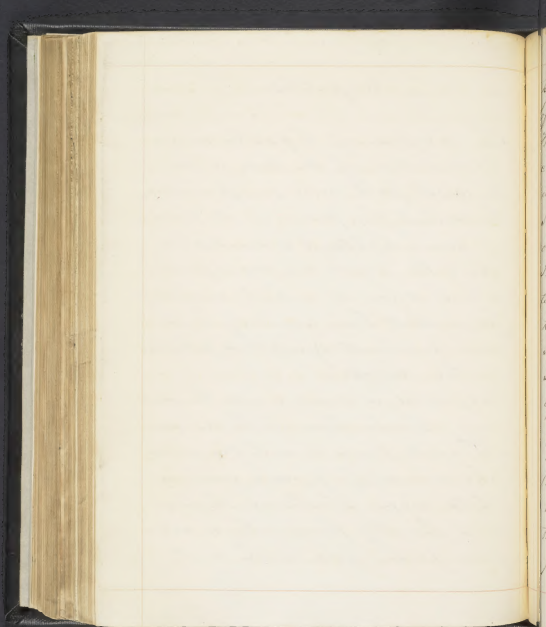
November 1828.



Hepatitis.

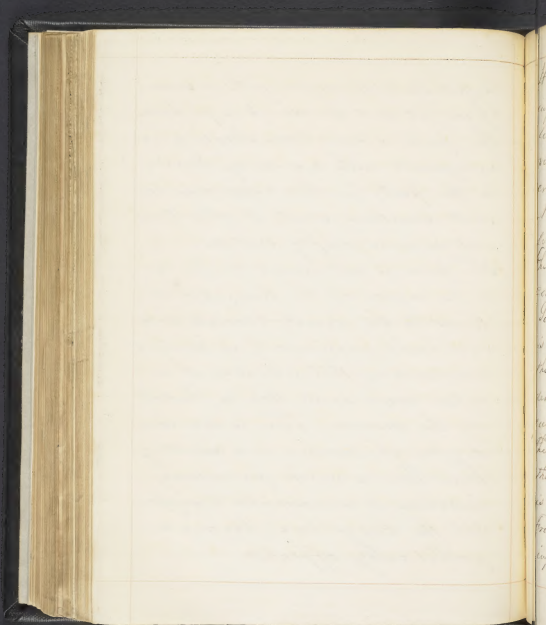
The accession of Hepatitis or inflammation of the liver, is for the most part, more or less sudden, the patient complaining at times, of some tightness or constriction about the praecordia, accompanied with a degree of anxiety and fear, for a short time, previously to the more prominent symptoms peculiar to this disease.

Hepatitis is divided into the acute and chronic form of the disease. The acute comes on with the usual phenomena of pyrexia, such as chills, rigors, flushes of the face, and finally fever; with an action full pulse, pain in the right



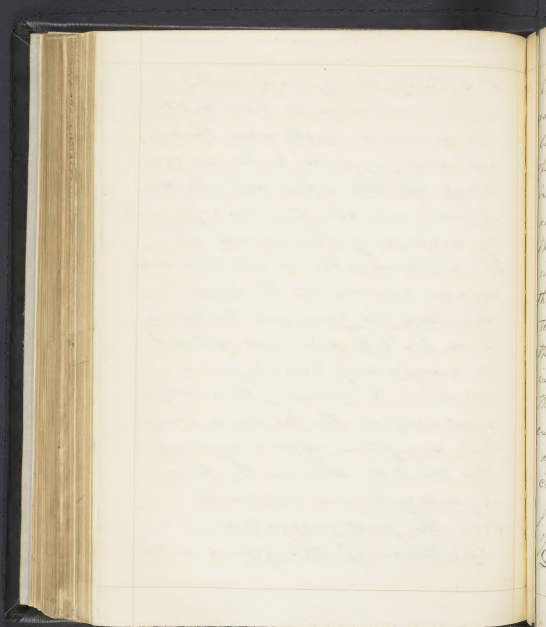
hypochondriac region, with a sense
of weight, and uneasiness in pressure.
The pain is sometimes shooting, ac-
companied with a sense of tension
in the part; in other cases more con-
stant, sometimes acute, at other times
obtus and deeply seated.

The pain is not always confined
to the region of the liver, but ex-
tends to the breast, clavicle and
shoulder; particularly of the right
side, and in that situation, it is
often more acute, than in the seat
of the disease. There is also some
dry cough, nausea and vomiting.
When there is much pulmonary
irritation, it is reasonable to suppose,
that the lungs have become sym-
pathetically affected.



It is the opinion of most writers on inflammation of the liver, that the lungs suffer most, when the concave surface, and peritoneal covering of that organ are affected. Cough and vomiting more frequently accompany this disease, when the inflammation is situated on the concave surface of the liver.

Sometimes the pain and tenderness is on the left side, and extends to the corresponding clavicle, and shoulder; which is generally the most frequent seat of the disease in women. These symptoms afford evidence that the left lobe of the liver, is diseased and inflamed. From the great magnitude and importance of this gland in the



human economy, we should naturally infer, that should its action be morbidly increased or suspended; the whole system, by its sympathy in connection, becomes deranged and diseased. In most instances the secretory action of the liver is increased; and it sometimes happens that the flow of bile, into the intestines, is impeded by a constriction of the ducts, or they may be obstructed in consequence of a collection of thick tenacious bile, or biliary calculi; and in this state, the bile is diffused through the general circulation, tinging the skin, conjunctiva of the eyes, and urine of a saffron colour.

During this condition, the bowels

1840

1. The first of the year was a very cold day, with a heavy frost, and a strong wind from the north.

2. On the 2nd, the weather was much warmer, and the wind shifted to the south.

3. On the 3rd, the sun shone brightly, and the wind was light and variable.

4. On the 4th, the weather was again cold, with a heavy frost, and a strong wind from the north.

5. On the 5th, the weather was much warmer, and the wind shifted to the south.

6. On the 6th, the sun shone brightly, and the wind was light and variable.

7. On the 7th, the weather was again cold, with a heavy frost, and a strong wind from the north.

8. On the 8th, the weather was much warmer, and the wind shifted to the south.

9. On the 9th, the sun shone brightly, and the wind was light and variable.

10. On the 10th, the weather was again cold, with a heavy frost, and a strong wind from the north.

11. On the 11th, the weather was much warmer, and the wind shifted to the south.

12. On the 12th, the sun shone brightly, and the wind was light and variable.

13. On the 13th, the weather was again cold, with a heavy frost, and a strong wind from the north.

14. On the 14th, the weather was much warmer, and the wind shifted to the south.

15. On the 15th, the sun shone brightly, and the wind was light and variable.

16. On the 16th, the weather was again cold, with a heavy frost, and a strong wind from the north.

17. On the 17th, the weather was much warmer, and the wind shifted to the south.

18. On the 18th, the sun shone brightly, and the wind was light and variable.

19. On the 19th, the weather was again cold, with a heavy frost, and a strong wind from the north.

20. On the 20th, the weather was much warmer, and the wind shifted to the south.

21. On the 21st, the sun shone brightly, and the wind was light and variable.

22. On the 22nd, the weather was again cold, with a heavy frost, and a strong wind from the north.

23. On the 23rd, the weather was much warmer, and the wind shifted to the south.

24. On the 24th, the sun shone brightly, and the wind was light and variable.

25. On the 25th, the weather was again cold, with a heavy frost, and a strong wind from the north.

26. On the 26th, the weather was much warmer, and the wind shifted to the south.

27. On the 27th, the sun shone brightly, and the wind was light and variable.

28. On the 28th, the weather was again cold, with a heavy frost, and a strong wind from the north.

29. On the 29th, the weather was much warmer, and the wind shifted to the south.

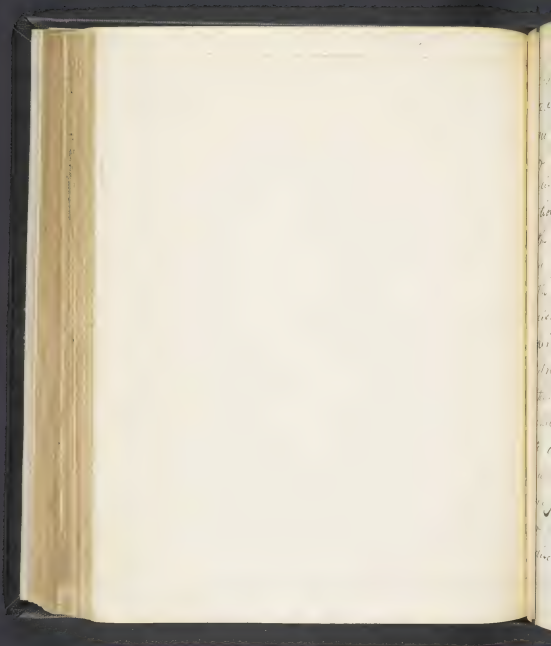
30. On the 30th, the sun shone brightly, and the wind was light and variable.

are torpid, the discharges small, in-
dicating a want of biliary secretion.
These symptoms are more frequently
met with, when the inflammation is
situated in the calices & sides of
the ureter. It is in this part, how-
ever, that we may expect the most
violent & dangerous symptoms, such as
anxiety and delirium. There is more
heat than is usually observed in gas-
tritis. In the commencement of this
disease the fever is usually dry,
the tongue warm, red in the first
stages, and in some cases the urine
is often becoming an ichorous ap-
pearance, on the bile being obstruct-
ed in its course, into the ducts, &c.
in consequence of constriction or
partial obliteration of the ducts.



common circulations, from the
inflamed gland pressing upon it,
and causing an approximation of
its parietes, which prevents the free
flow of bile, into the intestines; and
thus diffuses itself through the
general circulation.

During this irregular distribution
of bile, and the morbid secretory
action of the liver, it becomes con-
gested, swelled, and tender to the
touch, the tenderness extending all
over the abdomen, so that the patient
can hardly lie on either side, though
he mostly lies on the affected side.
Cases have occurred in which it
appeared to be ushered in by chol-
era morbus, or a flux of bile;
and it has happened that in



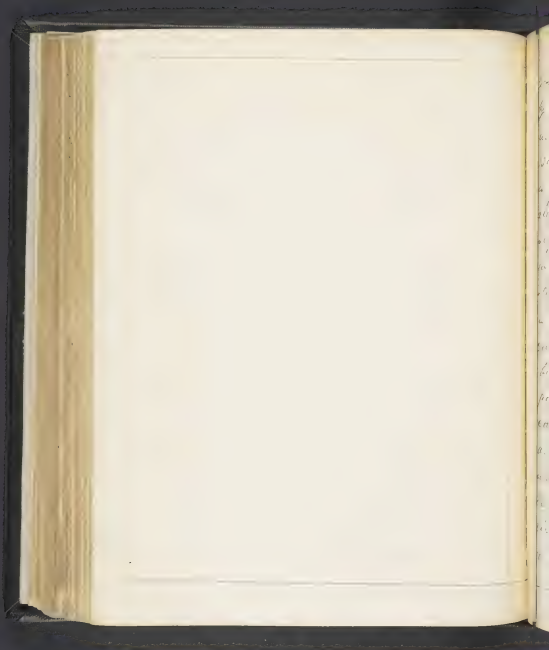
inflammation of the liver, has exis-
ted for some time, with little or
no tenderness in the part, sallowness
of the countenance, and but little
disturbance in the general circula-
tion. It has been seen to take on
the appearance of pulmonary con-
sumption, or gastritis, with pain in
the calves of the legs, or a peculiar
disagreeable sensation in the su-
perior extremities.

It will now remain to agree
that there were certain symptoms,
which would enable the practitioner
to determine the seat of the inflam-
mation. That if there were pulmo-
nary symptoms, the convex surface
of the liver, was inflamed; if gastric
disorder prevailed, the concave.



When the peritoneum covering it is in-
flamed the pain is sharp, the pulse
small, quick, hard, and corded,
and the vis and skin remain clear.
In the peritonitis to relieve the
pain is more than any other, and
the pulse ^{rate} strong, and hard.

Men are said to be more subject
to nephritis than women, which
might be presumed to be in con-
sequence of their being more
exposed to the exciting causes -
that is, sexual, and not to any pecu-
liarity of constitution in the male
sex predisposing them to nephritis.
It is known that children are not
so susceptible to inflammation
of the liver, as adults, though in
miasmatic countries, hemiplegia

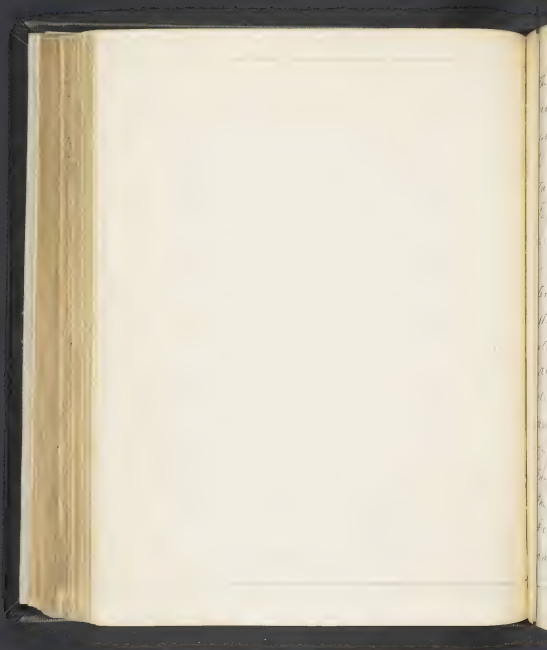


ious and spleen with them, are
by no means uncommon, as I have
witnessed for several years.

Between the tropics, where the system
is happily acted upon by an
almost vertical sun, it runs into
suppurative in a very period,
in consequence of the congested
state of the sanguineous circulation
in the portal circle, and of the ac-
cumulation of vitiated, thick, acrid
bile; in the gall bladder and
pancreatic, which keeps up a
constant irritation in the liver, in
addition to the inflammation,
which already exists in that organ.
Hepatitis is produced by sudden
vicissitudes of weather, by blows
on the cranium, or region of the



lives by the excessive use of ardent
spirits, and above all, by exposure
to intense summer heat, and the
damps of the nights in scorching
climates. It is also not of the
day in warm climates, a greater
increase of a redness in the
surface in the sun, excites the skin
and liver into an excessive and
morbid secretory action, which weakens
and debilitates their action.
repels, while the chilling blast of
the night, too rapidly abstracting
the animal heat from the vessels
on the surface, and likewise those
of the vena portarum, are instantly
struck torpid; the perspiratory and
biliary secretions are arrested, the
stage of the disease through

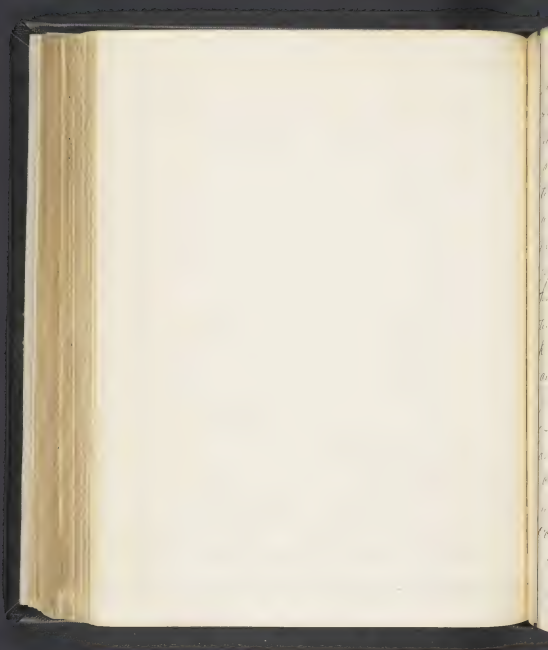


The liver is obstructed; and a temporary
congestion throughout the
portal system is the result.

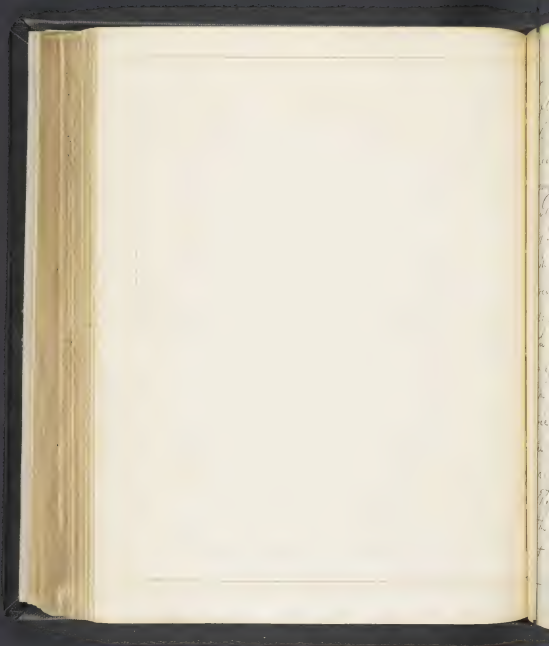
It may be produced by certain men-
tal emotions, or violent anger, rage &c.
There is an organ resembling the
human bladder, that has more influ-
ence over the liver and character
of the mind, than the liver.

When that organ is in a pathological
state, like Spargani's condition, or
"die many times before our
death." The spirits are depressed
and the person is indisposed.

The Liver, however, is credited to
the most & merited glances. &c.
The various conditions of this doctrine.
Scarcely, since the other depressing
patients, require no medication, by the

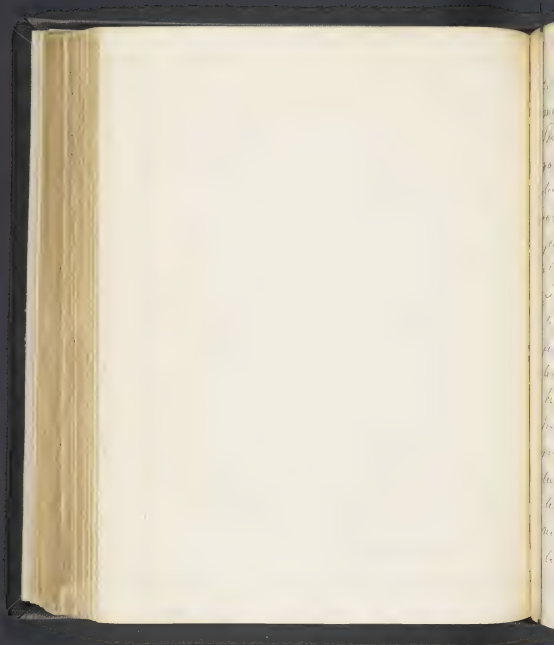


the secretion of bile - Under the
skin, pale is sallow, and check
the perspiration. On the other hand,
anger and rage, are well known
to increase the biliary secretion,
and their corresponding effects on
the surface, are visible to every eye.
Joy, hope, and what may be termed
the elating passions, while in moderation,
determine to the surface, and
keep up a salutary flow of bile,
and insensible perspiration, so con-
ducive to the healthy functions
of the body." Biliary concretions
are frequently formed in the gall
bladder and biliary ducts, pro-
viding a source of irritation, and of
the most violent inflammation of the
liver. Scirrhus of the liver.



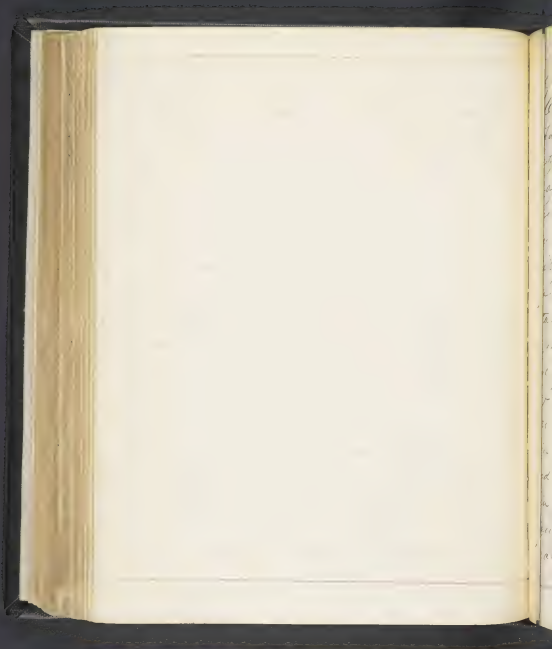
or neighbouring parts, or an inflammation of the duodenum, extending along the ducts to the liver, and involving its tissue with inflammation.

Generally there is no difficulty in distinguishing acute hepatitis. In the early stage, it sometimes resembles pneumonia inflammation, but the pain is not so acute, and the dyspnoea not so distressing and oppressive; there is also pain in the shoulder, sallow countenance, sallow urine, pain on pressure, and the colour of the urine excretions, plainly point out the seat of disease. This disease sometimes puts on the character of gastritis, but as it advances and becomes more



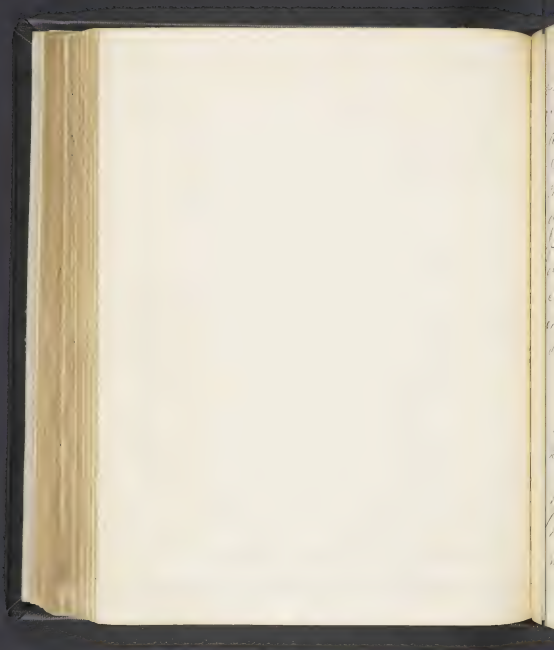
concentrated, its diagnostic signs are more strongly marked.

The terminations of ascutitis are various. It may terminate by resolution and absorption, gangrene, interstition, or suppuration; but in a majority of cases, if the acute inflammation is not checked in a few days, it will run on to the formation of abscess. If the abscess which forms in the liver, should point externally, recovery may take place; but on the contrary; if internally, the case may be considered desperate, unless adhesions should fortunately take place, between the liver, stomach, colon, or duodenum; into which, or into some be discharged, and pass off.



by vomiting or stool.

Cases are recorded, where the abscess has discharged itself into the cavity of the abdomen, which has caused the patient's death, from septic fever, or peritoneal inflammation. If the abscess should be situated high upon the convex surface of the liver, adhesions may take place between it and the diaphragm, and the contents of the abscess be discharged into the cavity of the thorax, producing emphysema; or the lungs may be involved in the adhesions, and the pus be poured into its parenchyma, which, if in any considerable quantity, may quickly prove fatal from suppuration; or, in the quantity of pus



is not very great, it may be thrown
off by expectoration and the sal-
ient relief.

Cullen and some other writers state
that the pus is sometimes thrown
out through the rectum.
If the case should terminate by res-
olution, there is generally some
critical discharge, as copious sweats,
or discharge from the nose, or hemorrhage
from vessels; or profuse perspira-
tion or urinous discharge with
calenture sediment. This calenta-
re effort of nature to relieve
herself of disease may be known
by a subsidence of pain, and a
general melioration of the symptoms.
Herpetic sometimes terminates by
metastasis, the inflammation being



translated to the spleen or skin, making its appearance on the surface, in the form of erysipelas, or by pain and tenderness with tumefaction in the left hypochondriac region.

It is the opinion of the present author of the theory and practice of medicine in the University of Pennsylvania, that inflammation of the liver, has its primary seat in the stomach, the mucous membrane of which, becoming affected, and by consent of parts the morbid impression is extended to the liver itself.

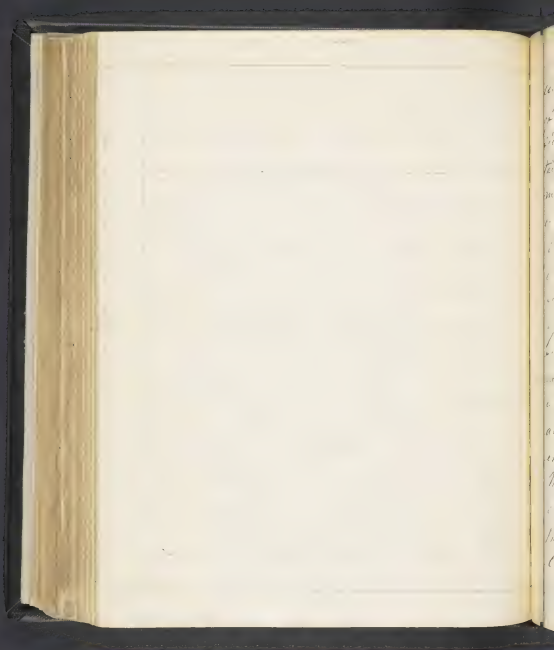
This deduction we presume has been drawn from a careful attention to the history, cause, symptoms, and probably also from its analogy to Cholera morbus.



The nature of hepatitis when well defined, plainly points out the treatment best suited to that disease.

In this affection we have one of the most important organs in the body, suffering from acute inflammation, and which will quickly produce some organic lesion, if it is not arrested in its progress by a prompt and vigorous course of treatment.

In the commencement of acute hepatitis, active depletion is demanded; and should be pushed to a considerable degree. Venesection should be pushed to eighteen or twenty ounces; and repeated day after day, or two or three times in the twenty four hours, as long as the state of the system or pulse



demand it, regardless of any fear
of debility, or its consequences arising
from such depletion. In a train
this amount, or a robust adult
man, will generally make but little
or no impression on the system. The
blood should be drawn in a full
and large stream, so as to produce a
state of the system, approaching
syncope, which may probably arrest,
subvert, or alter the morbid action
existing in the system. Otherwise it
will generally have but a very faint
and transitory effect on the gen-
eral circulation.

While there is general bloodletting
employed, topical depletion from
the region of the liver, by cups or
leeches, is of primary importance.

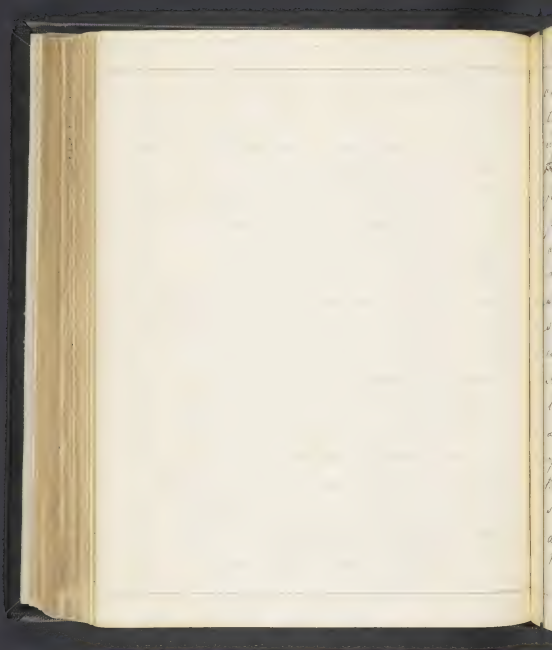


in the treatment of hepatitis.

After we have in some degree controlled arterial action, there should be a large blister applied over the right hypochondriac region, and kept discharging for a considerable length of time.

Purgatives are of the highest importance in the management of hepatitis; and those of the mercurial ^{saline} kind should be selected.

Twelve or fifteen grains of calomel, should be taken at night, and worked off next morning by sulphate of magnesia, alone, or combined with calcined magnesia; which should be continued so as to keep up a regular saline evacuation from the bowels. It is the practice of some physicians



after ressection, to be used in the
treatment of hepatitis, by endeavour-
ing to produce ptyalism, but this
~~this~~ would not be a good practice;
for we presume there are but few
imitations of any experience, who
are not duly sensible of the great
difficulty there is in producing
salivation, while there is any con-
siderable degree of inflammation
existing in the system.

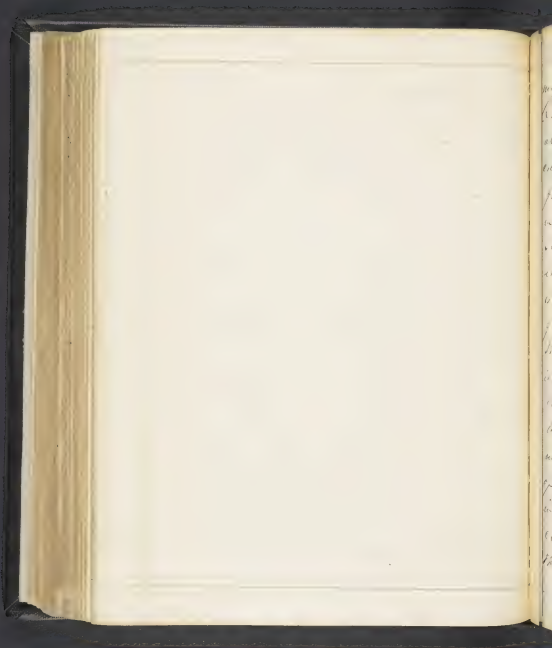
After arterial action has in some degree
been reduced, we should then with
a view to removing every remnant
of disease ~~up~~ ~~down~~ remaining in
the liver, resort to salivation, which
should be gradually induced
and kept up for sometime.

When we have succeeded in establish-



ing ptyalism, the bowels should be kept open by giving small doses of castor oil, every morning in order to carry off the acrid biliary secretions, which are always discharged in those cases; and likewise to guard the intestine from its acrid and stimulating effects, which would very much distress the patient.

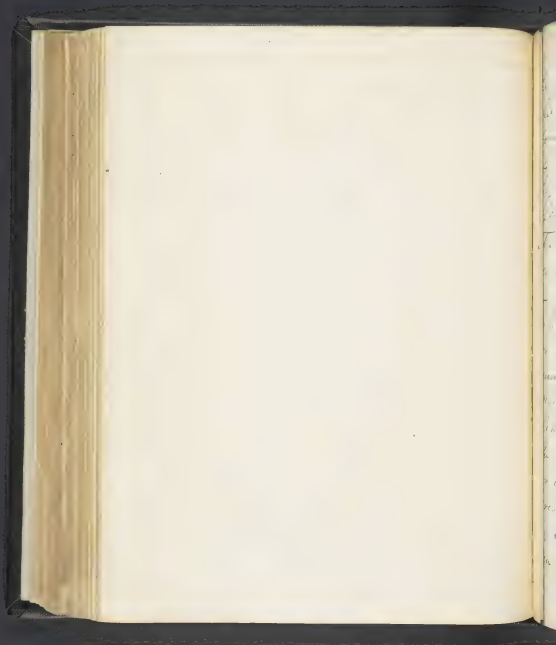
The symptoms which indicate the existence of Chronic Hepatitis are: a hollow countenance - emaciation, irregular bowels, high coloured urine, scalding in its discharge - low spirits - often a chronic fever, with pain, fulness, or hardness in the region of the liver - evening fever, dry cough, and swelling of the ancles, are the prominent features of this deplorable



malady." (Viktor)

Chronic Hepatitis appears to be almost always attendant on the diminished secretion of bile, either as resulting from that atony, which takes place in an organ, that has been long stimulated into inordinate, or at least irregular action, by hot climates, or from structural derangement, generally induration &c.

It is likewise evident, that the bile is vitiated in quality, as well as deficient in quantity, and when the liver happens to be excited into an inordinate action, a larger quantity of acrid, vitiated bile, is poured into the intestines than usual, which causes a sensation of scalding in the bowels, as it passes through



then, producing a bilious diarrhoea,
which subsides in a short time, the
bowels resuming their former state
of torpidity and inaction, which
they had been in previously to this
flow of bile.

This torpid state of the bowels, in-
dependent on other - the liver, accumulates
ex morbid biliary accumulations,
which burst about the duodenum,
or regurgitate into the stomach, &
excite peristaltic motion, producing
nausea, vomiting of green bile, sick
head ache, vertigo, &c. &c. &c. &c.
In treating this various obstruction,
or torpid state of the liver, the in-
crease and melioration of the biliary
secretion, should always be kept
in view.



Among the remedies calculated to excite and keep up a healthy secretion of bile, and stimulate perspiration, mustard given in such a repeated dose, so as to produce and keep up a bracing taste in the mouth for some time, holds a distinguished rank in the treatment of chronic dyspepsia. It is in this disease, that mustard exerts its most powerful and extended influence over the system, in controlling disease, proving that in this case, to be, what Dr. Rush pronounced it, "the Sampson of the materia medica." It was here thought proper to combine opium and antimonic powder with it, to ward off lower bowel irritation and determine to the surface.



we should endeavour to keep up a
regular peristaltic motion in the
intestines, and excite the mouths of
the secretory ducts of the liver,
which will tend to eliminate the
viscid and depraved secretions from
that organ. The blue pill adminis-
tered in the dose of from three to
five grains three times in the twenty
four hours, aided in its operation by
some mild laxative, so as to produce
a few evacuations during the day,
will generally carry off morbid
biliary accumulations which have
collected about the duodenum, and
obviate in a wonderful degree that
mental dissonance, and long
train of nervous symptoms, so con-
stantly attendant on that disease.



Next to mercury, there is no medicine
belonging to the materia medica, that
has so decided an affinity for the
liver as Nitric acid.

Given to the amount of one, two, or
three drachms, in the twenty four
hours, it has a very powerful and
decided effect upon the liver, in
enlarging the biliary ducts, and
establishing healthy action in that
organ.

But to the nitro-muriatic acid bath,
I am disposed to attribute still more.
One bath of the strength recommended
by Dr. Scott, and six, better
(see ser. 1. ii) will cure I believe
any morbid action, which may
arise on the liver, it will
also in warm water, maintain



both in medicinal strength for use.
In a case of Chronic Hepatic derange-
ment (Mr. White) who has been

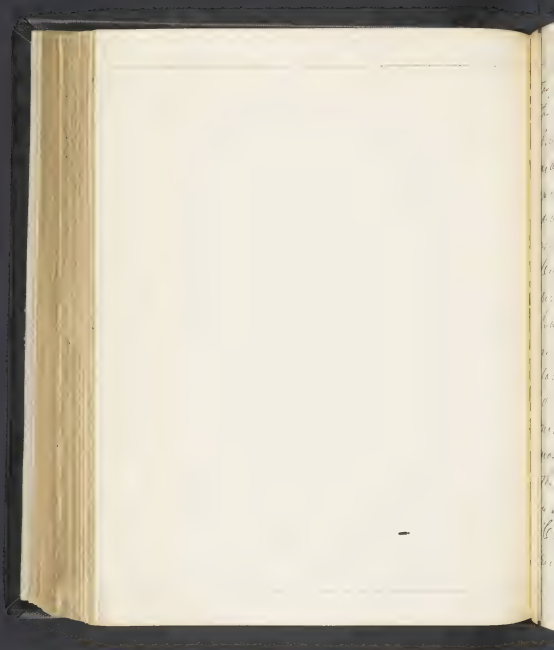
labouring for a considerable time
under the more prominent symp-
toms of approaching, if not con-
vinced Chronic Derangement of the
liver; such as sallow countenance,
irregular bowels, - high coloured
urine, - low spirits - sometimes a
violent diarrhoea, which sometimes
lasts but a few days at a time,
subsiding with the most obstinate
constipation, & dull burning pain
in the right shoulder extending
down the arm to the elbow; Lumbago
and soreness in the region of
the liver, with evening fever &c.
The attending physicians, Doctors



Use and heat, had used the nitro-
muriatic acid foot bath, with some
little remedial effect, but the vio-
lence of the case, seemed not to yield
to this partial manner of treatment.
At length it was agreed upon
them, to have a bath sufficiently
large to immerse the whole body.
Accordingly it was secured of the
strength above recommended. The
patient was placed in it, and per-
mitted to remain in it twelve or
sixteen minutes, which produced
a very considerable sickening and
stinging sensation, as described by
the patient. After he was removed
from the bath, brisk frictions were
employed, with warm dry flannels
for a time twelve or fifteen min-

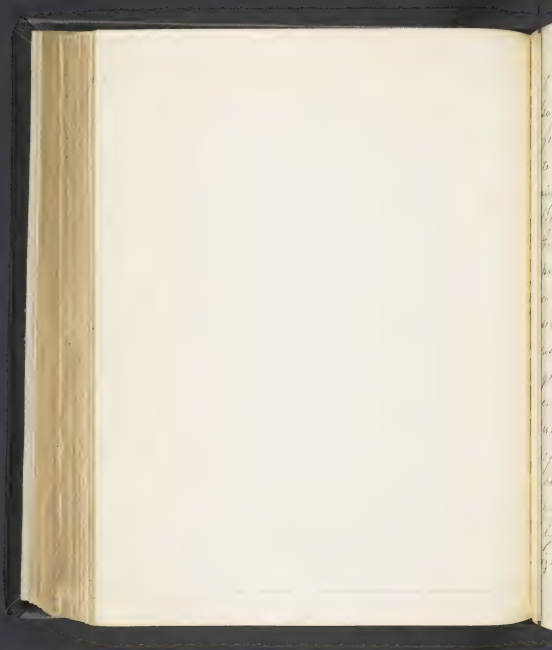


acts, and the patient placed in
bed. It produced a general and
pleasant glow on the surface ensuing
in a gentle perspiration, which lasted
ten or twelve hours. The bath was
again resorted to the next night
and regularly continued for a
week, without intermission, followed
by friction with dry flannels af-
ter each bathing. No perceptible
amendment was observed until after
the fifth application of the bath.
The chancre was then evident and the
effect much greater than was anti-
cipated. The most sanguine ex-
pectations. The flow of bile was
much more copious than had ever
been produced by any remedy.
Sallowiness of the countenance and

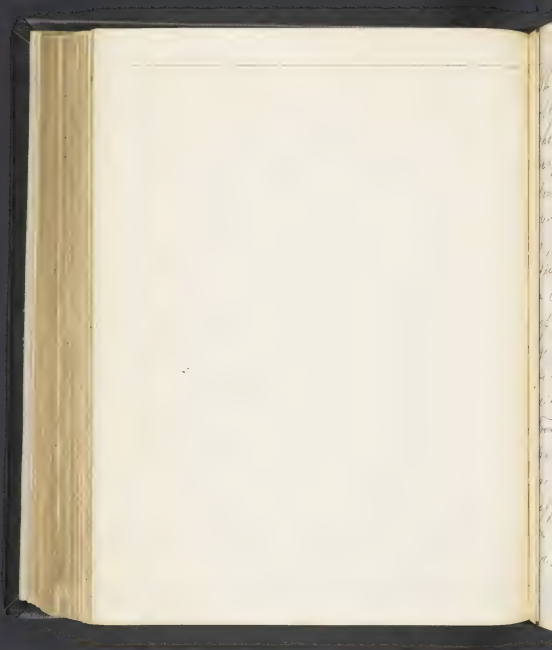


the tinge of the urine was removed,
the bilious diarrhoea corrected, the
bowels returning their regular and
healthy action. The benumbing
pain in the shoulder and arm subsi-
ded, the soreness in the right hypo-
chondriac region greatly relieved.
Contra-hepatic sympathy became
regularly established, and the spirit
and digestion regained their tone
and vigor. This patient had been
laboring under chronic hepatic
derangement for more than two years
notwithstanding which, his recovery
was rapid and he has remained in
the perfect enjoyment of unintem-
rupted health ever since.

Case 11— Mrs. Leade, a lady of
remarkable intelligence, about thirty

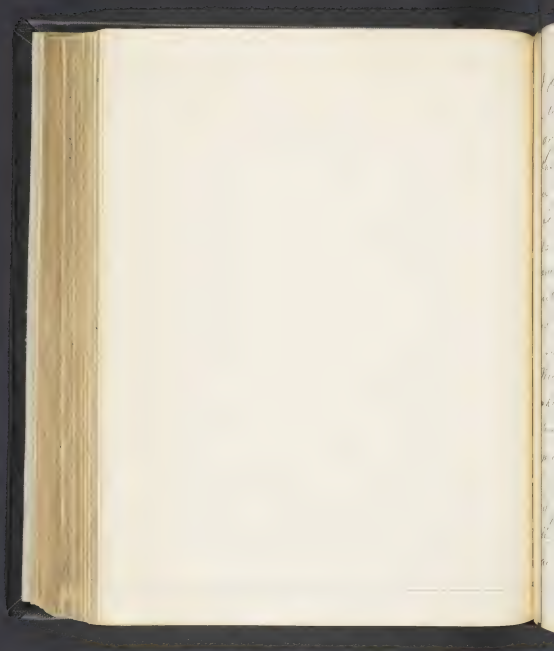


As she, however, has been
subject to biliousness, very near
for the last eight or nine years,
taken calomel pretty largely; dur-
ing her previous sickness, and has
become so easily affected by it,
that she could not take it, without
producing its characteristic action
on the system. Having suffered
several times from stricture she
resolved never to swallow another
grain of calomel upon any consid-
eration. From the length of time
which she has been the subject
of bilious fever, it appeared to
me, as if a most violent
attack, which had or was about
to produce structural disorgan-
ization in the liver.

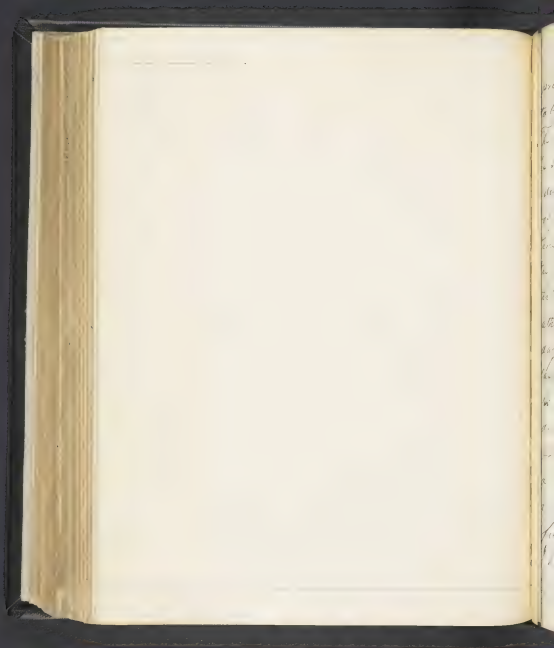


She had for the last eighteen months
oblong benumbing pain ⁱⁿ the right
shoulder, which extended back to the
scapula, and down the arm to the el-
bow; at times with fulness and ten-
derness in the right hypochondriac
region. This fulness and tenderness
she states was always attended
a copious and spontaneous flow
of bile. On the 14th of April
1851, she was attacked with bilious
fever, which from the symptoms in-
dicated a serious case.

From the strong objections which this
patient had to calomel, and the
previous and decidedly good
effect, which the acid bath had
in the case of chronic hepatitis
arranged it; which I have stated



I determined to try the bath in
Mrs. C's case. whose skin was cold,
dry, and lumpy. The bath in this
case was not used so extensively as
in the case above mentioned. The
feet and legs, up to the knees, were
bathed every night, and the arms,
arms, and breast, were changed
with the same bath, which produced
a very considerable degree of
pricking and stinging sensation;
though, from the torridity of her
skin, she could bear it fifteen or
twenty minutes at a time, without
much complaint. After each
bathing brisk frictions, with
dry flannels, were employed, as
in the case I have mentioned,
and with a similar effect in

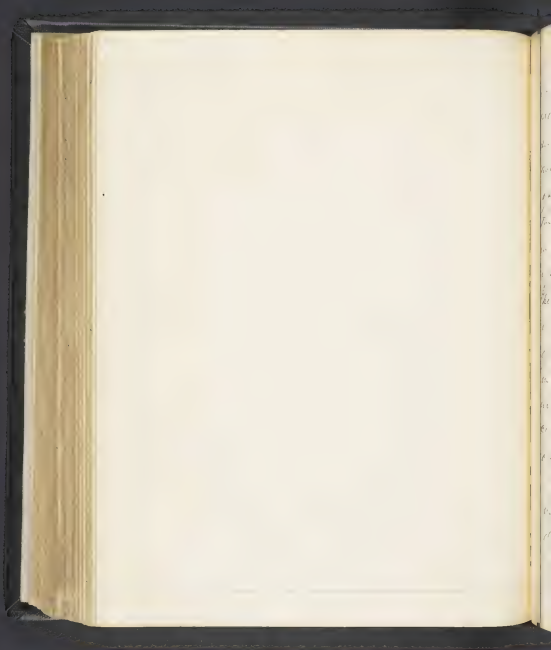


producing perspiration, and es-
tablishing capillary circulation.

The bath was repeated several nights
in succession, and a Siality powder
administered next morning; which
was sufficiently cathartic to produce
three or four alvine evacuations during
the day, which were as bilious as any
that I had seen produced from an
cathartic whatever. On the fifth
day ptyalism was produced, which
lasted three weeks.

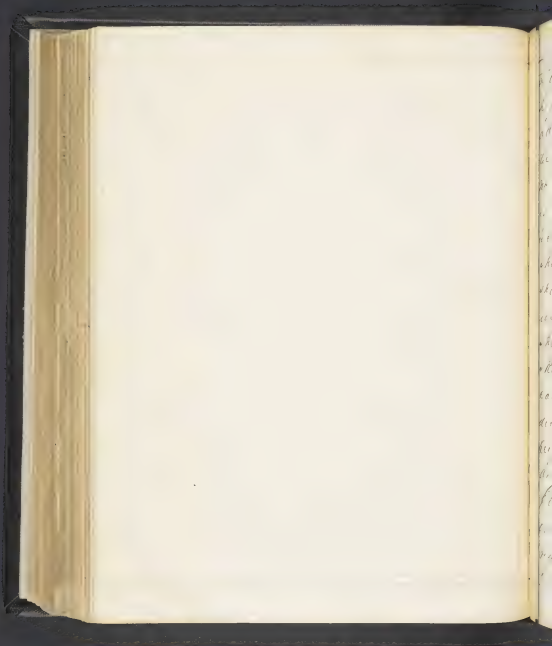
As soon as salivation was fully in-
duced, the disease gave way, and
soon that time, she had not had
a fever; but had a good recovery
and is at this time enjoying
fine health.

I had a conversation with this lady



the source of her disease, the
menstruation the abdominal swelling,
and she informed me that she had
not experienced the slightest degree
of soreness in the side, or pain in
the shoulder or arm, but remained
in the perfect enjoyment of uninter-
rupted health!

These cases have made a very strong
impression on my mind, in favour
of the nitro-muriatic acid bath
in bilious diseases, accompanied
with torpidity of the capillary
circulation on the surface, with
obstructed liver. I have seen the
bath used in a great many cases,
in which the biliary organs were
dysordered; and I must believe
without advantage to the patients.



During the treatment of chronic hepatic derangement, the most rigid adherence to the whole antiphlogistic regimen should be observed, and no article of food or drink, which is calculated to excite, irritate, or increase the arterial circulation, should be permitted. The diet should be light, nutritious, and easy of digestion. The patient should wear flannel next to the skin, and observe every possible care to prevent any exposure to sudden vicissitudes of weather, and keep the feet warm and perfectly dry. Her should also use the flesh-brush, with brisk friction over the right hypochondriac region, so as to excite the extreme

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vessels on the surface; and by sym-
pathy, those of the vena portarum;
thus establishing cutaneo-hepatic
sympathy; which is evidently
so congenial to the healthy
functions of the body.

